



Report in Brief

June 8, 2022

Background

The National Oceanic and Atmospheric Administration's (NOAA's) major environmental satellite systems—i.e., the Geostationary Operational Environmental Satellite-R Series, Joint Polar Satellite System, Deep Space Climate Observatory, and Space Weather Follow On-Langrange 1—are expected to provide observations for earth and space weather into the late 2020s or the early 2030s. NOAA has been planning and taking initial steps to build its next-generation satellite systems to ensure continuity of operations and enhance environmental data.

The success of NOAA's next-generation satellite systems relies on a solid foundation of requirements, which form the basis for architecture, design, integration, and verification. Requirements management is important to ensure alignment between user needs and delivered systems' capabilities. Also contributing to NOAA's success will be decision makers' ability to manage next-generation programs as a portfolio. Portfolio management helps decision makers determine which programs best support goals, provide expected results, and have appropriate resources.

Why We Did This Review

Our audit objective was to assess NOAA's progress planning and implementing its next-generation satellite system architecture.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The Success of NOAA's Next-Generation Satellite System Architecture Depends on Sound Requirements Management Practices

OIG-22-022-A

WHAT WE FOUND

We found the following:

- I. NOAA requirements management practices need improvement.
- II. NOAA should improve tools in support of observing system portfolio management.

WHAT WE RECOMMEND

We recommend that the NOAA Deputy Under Secretary for Operations do the following:

1. Update policies and procedures to ensure user observation requirements are validated in advance of next-generation satellite system acquisitions.
2. Ensure that next-generation satellite programs do not define more stringent requirement thresholds than corresponding thresholds in the NOAA dataset.
3. Ensure that next-generation satellite programs include requirement objective values that are different from thresholds.
4. Assign responsibility and design a process for determining the relative priority of each NOAA user observation requirement.
5. Ensure that the National Environmental Satellite, Data, and Information Service (NESDIS) standardizes requirement priority definitions for next-generation programs, to include information about the extent to which its programs contribute to meeting NOAA user observation requirements.
6. Ensure that NESDIS revises policies and procedures for assigning requirements to next-generation satellite programs.
7. Ensure that portfolio management tools include accurate and complete data to produce useful information for investment decisions.